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Docket No.: KCC-14,900

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Tong SUN  
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Group No: 3763

Serial No: 10/025,836

Filing Date: 18 December 2001

Examiner: M. Kidwell

Title: CELLULOSE FIBERS TREATED WITH  
ACIDIC ODOR CONTROL AGENTS

Customer No.: 35844

SUMMARY OF INTERVIEW

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Applicants' attorney thanks the Examiner for the courtesy of the telephone interview on 23 August 2004. The undersigned explained that the invention recited in Claim 24 is directed to an odor control system as described and illustrated on page 24 of the specification. The odor control system includes a non-crosslinked reaction product of cellulose fibers and a partially neutralized carboxylic acid odor control agent. The cellulose fibers and the partially neutralized carboxylic acid odor control agent are chemically bound together. The odor control agent is selected from the group consisting of partially neutralized HMCA, partially neutralized PCA, and combinations thereof.

I hereby certify that this correspondence (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

24 Aug 2004

24 Aug 2004  
Date

*Mammy Petros*  
Signature

The term "HMCA" stands for hydroxyl multi-carboxylic acid. The term "PCA" refers to polycarboxylic acid. The chemical reaction links only some of the carboxyl groups to the cellulose, leaving the remaining (e.g. neutralized) carboxyl groups to react with odiferous compounds. As demonstrated by the Examples on page 25, the reaction product will not behave as an odor control compound unless some of the carboxyl groups are neutralized.

As explained during the interview, U.S. Patent 5,137,537 to Herron discloses reacting HMCA with cellulose fibers using a catalyst, for the purpose of crosslinking the cellulose fibers. The HMCA is not partially neutralized prior to the reaction. There is no suggestion that the reaction product might function as an odor control system. Applicants' Example 1 (page 25) establishes that, without partial neutralization, the reaction product does not affect or control odor.

European Patent Application 0,311,344 to Jordan et al. discloses cellulose fibers mixed with partially neutralized carboxylic acid buffering agents. However, the ingredients are not chemically linked together. U.S. Patent 3,533,725 (cited at Col. 6, lines 4-7 of Jordan et al.) discloses ion exchange cellulose fibers, but does not disclose cellulose fibers chemically linked to a partially neutralized carboxylic acid odor control agent.

The Examiner expressed concern that the term "non-crosslinked reaction product" in Claim 24 may not be supported by the specification. The undersigned pointed to page 8 of the specification as providing support. Alternative language discussed included the possibility of identifying the reaction product as an "ester", and specifying a degree of neutralization for the odor control agent.

The Examiner indicated she will discuss the case with her supervisor. If only minor issues remain, she will call the undersigned. If significant issues remain, another Office Action will issue.

Respectfully submitted,



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